

Fluorouracil (5-FU) and Mitomycin with Radiation Therapy

Care Team Contact Information: _____

Pharmacy Contact Information: _____

Diagnosis: _____

- This treatment is often used for anal cancer, but it may also be used for other diagnoses.

Goal of Treatment: _____

- Treatment may continue for a certain time period or until side effects are no longer controlled.

Treatment Regimen

Treatment Name	How the Treatment Works	How the Treatment is Given
Mitomycin (MY-toh-MY-sin)	Slows down or stops the growth of cancer cells by damaging the genetic material that cancer cells need to multiply.	Infusion given into a vein.
Fluorouracil (floor-oh-YOOR-uh-sil) It is also called "5-FU".	Stops cancer cells from making the instructions they need to grow and multiply, causing the cells to die.	Continuous infusion given into a vein through a pump over 4 days (96 hours).

Treatment Administration and Schedule:

- Mitomycin is given on Day 1 and may also be administered on Day 29. Talk with your care team about your specific treatment schedule.
- Fluorouracil (5-FU) is given over 4 days (96 hours), beginning on Day 1 and ending on Day 5. The same infusion schedule is later repeated, beginning on Day 29 and ending on Day 33.
- Talk to your care team to find out which days you will have radiation therapy.

☐ Option #1: Mitomycin on Days 1 and 29 and continuous infusion fluorouracil (5-FU) over 4 days.

Treatment Name	Day 1	Day 2	Day 3	Day 4	Day 5	...	Day 29	Day 30	Day 31	Day 32	Day 33
Mitomycin	✓						✓				
Fluorouracil (5-FU)	→	→	→	→	→		→	→	→	→	→
Radiation Therapy	Ask your care team about your radiation schedule.										

☐ Option #2: Mitomycin on Day 1 and continuous infusion fluorouracil (5-FU) over 4 days.

Treatment Name	Day 1	Day 2	Day 3	Day 4	Day 5	...	Day 29	Day 30	Day 31	Day 32	Day 33
Mitomycin	✓										
Fluorouracil (5-FU)	→	→	→	→	→		→	→	→	→	→
Radiation Therapy	Ask your care team about your radiation schedule.										

Appointments: Appointments may include regular check-ups with your care team, treatment appointments, lab visits, and imaging tests. It's important to keep your appointments whenever you can. If you miss any appointments, call your care provider as soon as possible to reschedule your appointment.

Supportive Care to Prevent and Treat Side Effects

Description	Supportive Care Given at the Clinic or Hospital	Supportive Care Taken at Home
To help prevent or treatment nausea or vomiting		
Other		

Common Side Effects

Side Effect	Important Information
Low White Blood Cell (WBC) Count and Increased Risk of Infection (Mitomycin Boxed Warning)	Description: WBCs help protect the body against infections. If you have a low WBC count, you may be at a higher risk of infection. WBC counts typically reach their lowest level approximately 4 weeks after receiving mitomycin, and they usually recover within 10 weeks. Recommendations: - Wash your hands and bathe regularly. - Avoid crowded places. - Stay away from people who are sick. - Your care team may prescribe a drug that promotes the growth of WBCs. Talk to your care team if you have: - Fever of 100.4 °F (38°C) or higher - Chills - Cough - Sore throat - Painful urination - Tiredness that is worse than normal - Skin infections (red, swollen, or painful areas)
Low Platelet Count (Mitomycin Boxed Warning)	Description: Platelets help the blood clot and heal wounds. If you have low platelet counts, you are at a higher risk of bruising and bleeding. Platelet counts typically reach their lowest level approximately 4 weeks after receiving mitomycin, and they usually recover within 10 weeks. Recommendations: - Blow your nose gently and avoid picking it. - Brush your teeth gently with a soft toothbrush and maintain good oral hygiene. - Use an electric razor for shaving and a nail file instead of nail clippers. - Avoid over-the-counter medications that may increase the risk of bleeding, such as NSAIDs. - Talk with your care team or dentist before medical or dental procedures, as you may need to pause your treatment. Talk to your care team if you have: - Nosebleed lasting over 5 minutes despite pressure - Cut that continues to bleed - Significant gum bleeding when flossing or brushing - Severe headaches - Blood in your urine or stool - Blood in your spit after a cough
Low Red Blood Cell (RBC) Count and Hemoglobin (Hgb)	Description: RBCs and Hgb help bring oxygen to your body's tissues and take away carbon dioxide. If you have low RBC counts or Hgb, you may feel weak, tired, or look pale. Recommendations: - Get 7 to 8 hours of sleep each night. - Avoid operating heavy machinery when tired. - Balance work and rest, staying active but resting when needed. Talk to your care team if you have: - Shortness of breath - Dizziness - Fast or abnormal heartbeats - Severe headache

Nausea and Vomiting	Description: Nausea is an uncomfortable feeling in your stomach or the need to throw up. This may or may not cause vomiting. Recommendations: • Eat smaller, more frequent meals. • Avoid fatty, fried, spicy, or highly sweet foods. • Eat bland foods at room temperature and drink clear liquids. • If you vomit, start with small amounts of water, broth, or other clear liquids when you are ready to eat again. If that stays down, then try soft foods (such as gelatin, plain cornstarch pudding, yogurt, strained soup, or strained cooked cereal). Slowly work up to eating solid food. • Your care provider may prescribe medicine for these symptoms. Talk to your care team if you have: • Vomiting for more than 24 hours • Vomiting that's nonstop • Signs of dehydration (like feeling very thirsty, having a dry mouth, feeling dizzy, or having dark urine) • Blood or coffee-ground-like appearance in your vomit • Bad stomach pain that doesn't go away after vomiting
Mouth Irritation and Sores	Description: This treatment can irritate the lining of the mouth. In some cases, this can cause redness, sores, pain, and swelling. Recommendations: • Rinse your mouth after meals and at bedtime, and more often if sores develop. • Brush your teeth with a soft toothbrush or cotton swab after meals. • Use a mild, non-alcohol mouth rinse at least four times daily (after meals and at bedtime). A simple mixture is 1/8 teaspoon salt and 1/4 teaspoon baking soda in 8 ounces of warm water. • Avoid acidic, hot, spicy, or rough foods and drinks that may irritate your mouth. • If you have mouth sores, avoid tobacco, alcohol, and alcohol-based mouthwashes. • Your care team may prescribe medicine for these symptoms. Talk to your care team if you have: • Pain or sores in your mouth or throat
Diarrhea	Description: Diarrhea is when you have loose, watery bowel movements more often than usual. The need to use the bathroom may occur urgently. Recommendations: • Keep track of how many times you go to the bathroom each day. • Drink 8 to 10 glasses of water or other fluids every day, unless your doctor tells you otherwise. • Eat small meals of mild, low-fiber foods like bananas, applesauce, potatoes, chicken, rice, and toast. • Stay away from foods with high fiber (like raw vegetables, fruits, and whole grains), foods that cause gas (like broccoli and beans), dairy foods (like yogurt and milk), and spicy, fried, and greasy foods. • Your care team might suggest a medicine for diarrhea. Talk to your care team if you have: • 4 or more bowel movements than normal in 24 hours • Dizziness or lightheadedness while having diarrhea • Bloody diarrhea

Liver Problems	Description: Treatment can harm your liver. This may cause nausea, stomach pain, and bleeding or bruising. It can also turn your skin and eyes yellow and make your urine dark. Lab tests may be performed to monitor liver function. Talk to your care team if you have: • Yellowing of your skin or the whites of your eyes • Severe nausea or vomiting • Pain on the right side of your stomach area (abdomen) • Dark urine (tea colored) • Bleeding or bruising more easily than normal
Fatigue	Description: Fatigue is a constant and sometimes strong feeling of tiredness. Recommendations: • Routine exercise has been shown to decrease levels of fatigue. Work with your care team to find the right type of exercise for you. • Ask your family and friends for help with daily tasks and emotional support. • Try healthy ways to feel better, like meditation, writing in a journal, doing yoga, and using guided imagery to lower anxiety and feel good. • Make a regular sleep schedule and limit naps during the day so you can sleep better at night, aiming for 7 to 8 hours of sleep. • Don't use heavy machines or do things that need your full attention if you're very tired to avoid accidents. Talk to your care team if you have: • Tiredness that affects your daily life • Tiredness all the time, and it doesn't get better with rest • Dizziness and weakness, along with being tired
Rash, redness, swelling, itching, or peeling of your skin on your hands and feet (Hand-Foot Syndrome)	Description: Hand-Foot Syndrome causes dryness, thickening, swelling, or blisters of the skin on the palms of your hands and soles of your feet. Recommendations: • Keep hands and feet moisturized with a non-scented moisturizing cream. • Applying urea 10% or 20% cream twice daily to the affected area may be helpful. • Avoid exposure to hot water on the hands and feet in showers or baths that may dry out the skin or by doing dishes. • Avoid tight-fitting shoes or socks. • Avoid excess rubbing on hands and feet unless putting on lotion. • Wear gloves when working with your hands. Talk to your care team if you have: • Painful blisters or calluses

Sensitivity to Sunlight	Description: Sun sensitivity is when your skin becomes more reactive or sensitive to sunlight than usual. This can lead to conditions like sunburn, rashes, or other skin problems, even after short periods of exposure. Recommendations: • Stay out of the sun as much as you can to lower the risk of sunburn, especially between 10 AM and 4 PM when UV rays are strongest. • Wear long-sleeved shirts with UV protection if possible. • Use broad-brimmed hats for extra sun protection. • Apply broad-spectrum sunscreen (UVA/UVB) with at least SPF 30 as directed on the bottle. • Use lip balm with at least SPF 30. Talk to your care team if you have: • Severe or painful sunburns
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Select Rare or Serious Side Effects

Side Effect	Talk to Your Care Team if You Have Any of These Signs or Symptoms	
Extravasation (Mitomycin)	Extravasation happens when medicine that is supposed to go into a vein leaks out into the tissues around it. This can cause pain, swelling, and damage to the skin and tissues. - Pain, burning, or stinging at the infusion site - Swelling, redness, or blistering around the site - Coolness or numbness in the area - Decreased blood flow or tissue damage, potentially leading to ulcers or tissue death in severe cases	
Lung Problems	- Cough - Shortness of breath	Chest pain
Heart Problems	- Swelling of your stomach-area (abdomen), legs, hands, feet, or ankles - Shortness of breath - Nausea or vomiting - Weight gain - Pain or discomfort in your arms, back, neck, or jaw - Protruding neck veins	- Palpitations (rapid or irregular heartbeat) - Dizziness or lightheadedness - Chest discomfort or pain - Fatigue - Confusion - Fainting or near-fainting spells - Breaking out in a cold sweat
Brain Problems	- Headache - Dizziness - Confusion - Memory problems - Difficulty concentrating	- Seizures - Muscle weakness - Tremors - Changes in mood or behavior - Sensory disturbances (such as tingling or numbness)
Hemolytic Uremic Syndrome (HUS)	HUS is a condition that happens when small blood vessels in the body become damaged. This damage causes red blood cells to break down, leading to anemia. The condition also causes blood clots to form in the blood vessels and, in turn, damage the kidneys. - Loss of color in the skin - Extreme tiredness - Easy bruising - Unusual bleeding, such as bleeding from the nose and mouth - Decreased urinating or blood in the urine - Swelling of the legs, feet or ankles. Swelling occurs less often in the face, hands, feet or entire body - Confusion, seizures, or stroke - High blood pressure	

Before starting treatment, ask your care team when to call 9-1-1 or seek emergency help.
If you experience any new, worsening, or uncontrolled side effects, contact your care team immediately.

Intimacy, Pregnancy, and Breastfeeding

- Talk with your care team about precautions you should take while receiving radiation therapy.
- Treatment may **harm an unborn baby**.
 - If you might get pregnant, take a pregnancy test before starting treatment.
 - Use an effective method of birth control during treatment.
 - If you think you might be pregnant or if you become pregnant, tell your care team right away.
 - If your partners could become pregnant, use an effective method of birth control—such as condoms—during treatment.
- **Do NOT breastfeed** during treatment.

Handling Body Fluids and Waste

Some drugs you receive may stay in your urine, stool, sweat, or vomit for many days after treatment. Because many cancer drugs are toxic, your body waste may also be dangerous to touch. To help protect yourself, your loved ones, and the environment, **follow these instructions** for at least **48 hours** after each dose of **mitomycin** and **fluorouracil (5-FU)**. Your care team may have additional precautions to take while receiving radiation therapy.

- Pregnant women should avoid touching anything that may be soiled with body fluids from the patient.
- You can use your usual toilet. Always close the lid and flush to discard all waste. If you have a low-flow toilet, flush twice.
- If the toilet or seat is soiled with urine, stool, or vomit, clean the surface after each use before others use it.
- Wash your hands with soap and water for at least 20 seconds after using the toilet.
- If you need a bedpan, inform your caregiver so they can wear gloves and assist with cleanup. Wash the bedpan with soap and water daily.
- If you cannot control your bladder or bowels, use a disposable pad with a plastic back, a diaper, or a sheet to absorb waste.
- Wash any skin exposed to body waste with soap and water.
- Wash soiled linens or clothing separately from other laundry. If you don't have a washer, place them in a plastic bag until they can be washed.
- Wash your hands with soap and water after touching soiled linens or clothing.

Additional Information

- **Tell your care team about all the medicines you take.**
This includes prescriptions, over-the-counter drugs, vitamins, and herbal products. Before starting any new medicine, supplement, or vaccine, ask your care team first.
- **People with deficiencies in the enzyme dihydropyrimidine dehydrogenase (DPD) may experience serious side effects.**
People with certain changes in a gene called "DPYD" may have a deficiency of the DPD enzyme. Some of these people may not produce enough DPD enzyme, and some of these people may not produce the DPD enzyme at all.
 - People who do not produce any DPD enzyme are at increased risk of sudden side effects that come on early during treatment with fluorouracil (5-FU) and can be serious, and sometimes lead to death.
 - Call your care team right away if you develop any of the following symptoms and they are severe, including:
 - Sores of the mouth, tongue, throat, and esophagus
 - Diarrhea
 - Low white blood cell counts
 - Nervous system problems
 - People with some DPD enzyme may have an increased risk of serious side effects with fluorouracil (5-FU) treatment that can sometimes lead to death.
 - Your care teams should talk with you about DPYD testing to look for DPD deficiency.
- **This Patient Education Sheet may not describe all possible side effects.**
Call your healthcare provider for medical advice about side effects. You may report side effects to the FDA at 1-800-FDA-1088.

Notes

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Scan the QR code below to access this education sheet.



Important notice: The Association of Cancer Care Centers (ACCC), Hematology/Oncology Pharmacy Association (HOPA), Network for Collaborative Oncology Development & Advancement, Inc. (NCODA), and Oncology Nursing Society (ONS) have collaborated in gathering information for and developing this patient education guide. This guide represents a brief summary of the medication derived from information provided by the drug manufacturer and other resources.

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